

Table 1
GLJ Petroleum Consultants
Domestic Crude Oil and Natural Gas Liquids
Price Forecast
Effective April 1, 2020

Year	Inflation %	CAD/USD Exchange Rate USD/CAD	WTI Crude Oil (39.6 API, 0.24%S) Cushing, OK		Brent Spot Crude Oil (38.3 API, 0.37%S) UK	MSW, Light Crude Oil (40 API, 0.3%S) at Edmonton	Bow River Crude Oil (21.4 API, 2.8%S) at Hardisty	WCS Crude Oil (20.9 API, 3.5%S) at Hardisty	Heavy Crude Oil Proxy (12 API) at Hardisty	Light Sour Crude Oil (38 API, 1.1%S) at Cromer	Medium Crude Oil (29 API, 2.0%S) at Cromer	Alberta Natural Gas Liquids (Then Current Dollars) at Edmonton				
			Constant 2020 \$	Then Current	Then Current	Then Current	Then Current	Then Current	Then Current	Then Current	Then Current	Then Current	Ethane	Propane	Butane	Condensate
			USD/bbl	USD/bbl	USD/bbl	CAD/bbl	CAD/bbl	CAD/bbl	CAD/bbl	CAD/bbl	CAD/bbl	CAD/bbl	CAD/bbl	CAD/bbl	CAD/bbl	CAD/bbl
2010	1.8	0.9711	94.51	79.52	80.25	77.87	68.45	67.27	60.76	76.58	73.76	N/A	46.84	65.91	84.27	
2011	2.9	1.0115	111.09	95.12	110.86	95.53	78.59	77.14	67.64	92.35	88.33	N/A	53.66	74.42	104.17	
2012	1.5	1.0009	106.89	94.21	111.71	86.60	74.42	73.13	63.64	84.51	81.37	N/A	29.04	66.70	100.84	
2013	0.9	0.9711	109.51	97.96	108.77	93.47	76.33	75.01	65.11	92.30	88.13	N/A	38.88	68.81	104.70	
2014	1.9	0.9055	102.96	93.00	99.71	94.58	81.08	81.03	73.73	92.68	89.67	N/A	45.53	69.20	102.44	
2015	1.1	0.7831	52.99	48.78	53.60	57.20	45.50	44.82	39.25	55.49	51.87	N/A	6.49	36.75	60.42	
2016	1.4	0.7551	46.61	43.38	45.05	53.08	39.83	38.96	32.78	51.46	48.84	N/A	13.40	34.49	56.25	
2017	1.6	0.7712	53.96	50.94	54.80	62.84	50.91	50.53	44.63	62.09	59.96	N/A	28.57	44.46	66.86	
2018	2.3	0.7719	67.49	64.73	71.55	69.22	49.03	49.52	39.80	72.94	69.60	N/A	26.79	32.96	78.60	
2019	1.9	0.7538	58.14	57.02	64.24	69.16	59.26	58.75	54.31	69.65	67.97	N/A	16.98	24.29	70.19	
2020 Q1 (est)	2.1	0.7471	46.78	46.78	52.56	53.06	36.80	35.90	26.65	52.91	50.68	N/A	21.30	36.02	63.42	
2020 Q2	0.0	0.715	25.00	25.00	29.00	23.78	14.39	13.99	7.95	23.54	23.06	5.47	5.94	16.17	30.77	
2020 Q3	0.0	0.720	30.00	30.00	34.00	31.25	21.23	20.83	14.83	30.94	30.31	5.47	9.38	21.25	37.50	
2020 Q4	0.0	0.725	35.00	35.00	39.00	38.62	26.61	26.21	19.83	38.23	37.46	7.02	13.52	26.26	44.14	
2020 Full Year	0.0	0.727	34.20	34.20	38.64	36.68	24.76	24.23	17.31	36.41	35.38	N/A	12.53	24.92	43.96	
2020 Q2-Q4	0.0	0.720	30.00	30.00	34.00	31.22	20.74	20.34	14.20	30.90	30.28	5.99	9.61	21.23	37.47	
2021	0.0	0.730	41.00	41.00	45.50	47.95	34.65	34.25	27.90	47.47	46.51	7.01	19.18	33.08	52.05	
2022	1.0	0.735	47.03	47.50	52.50	56.46	43.94	43.54	37.13	55.90	54.77	7.36	25.41	39.52	61.56	
2023	2.0	0.740	50.96	52.50	57.50	64.19	51.08	50.68	44.20	63.55	62.26	7.71	28.89	45.57	68.92	
2024	2.0	0.745	54.72	57.50	62.50	71.81	58.12	57.72	51.28	71.09	69.66	8.05	32.32	50.99	75.84	
2025	2.0	0.750	55.00	58.95	62.95	73.27	60.33	59.93	53.73	72.53	71.07	8.39	32.97	52.02	77.27	
2026	2.0	0.750	55.00	60.13	64.13	74.84	61.91	61.51	55.31	74.09	72.59	8.57	33.68	53.14	78.84	
2027	2.0	0.750	55.00	61.33	65.33	76.44	63.51	63.11	56.91	75.68	74.15	8.76	34.40	54.27	80.44	
2028	2.0	0.750	55.00	62.56	66.56	78.08	65.15	64.75	58.55	77.30	75.74	8.94	35.14	55.44	82.08	
2029	2.0	0.750	55.00	63.81	67.81	79.75	66.81	66.41	60.21	78.95	77.35	9.13	35.89	56.62	83.75	
2030+	2.0	0.750	55.00	+2.0%/yr	+2.0%/yr	+2.0%/yr	+2.0%/yr	+2.0%/yr	+2.0%/yr	+2.0%/yr	+2.0%/yr	+2.0%/yr	+2.0%/yr	+2.0%/yr	+2.0%/yr	

Historical futures contract price is an average of the daily settlement price of the near month contract over the calendar month.

Table 2
 GLJ Petroleum Consultants
Domestic Natural Gas
Price Forecast
 Effective April 1, 2020

Year	Henry Hub		Alberta				Saskatchewan			British Columbia		Huntingdon/ Sumas Spot	Dawn @ Ontario
	Constant	Then	AECO/NIT	Plant Gate		Plant Gate		Westcoast	Spot				
	2020 \$ USD/MMBtu	Current USD/MMBtu	Spot CAD/MMBtu	Spot CAD/MMBtu	ARP CAD/MMBtu	Empress CAD/MMBtu	SaskEnergy CAD/MMBtu	Spot CAD/MMBtu	Station 2 CAD/MMBtu	Plant Gate CAD/MMBtu			
2010	5.22	4.40	4.01	3.78	3.77	3.91	3.96	3.85	3.78	3.63	4.12	4.76	
2011	4.71	4.03	3.62	3.42	3.46	3.41	3.57	3.58	3.33	3.18	3.90	4.39	
2012	3.20	2.83	2.40	2.21	2.25	2.30	2.31	2.26	2.30	2.12	2.70	3.04	
2013	4.16	3.73	3.18	2.96	2.98	3.14	3.09	3.10	3.14	2.94	3.71	4.07	
2014	4.73	4.28	4.50	4.26	4.22	4.72	4.39	4.42	4.29	4.07	4.37	5.98	
2015	2.86	2.63	2.70	2.47	2.56	2.89	2.71	2.61	1.80	1.59	2.31	2.99	
2016	2.74	2.55	2.18	1.94	1.93	2.36	2.18	2.09	1.77	1.60	2.18	2.56	
2017	3.20	3.02	2.19	1.93	2.22	2.60	2.41	2.29	1.56	1.34	2.62	3.05	
2018	3.20	3.07	1.54	1.33	1.36	3.06	1.68	2.71	1.24	1.03	3.60	3.09	
2019	2.58	2.53	1.81	1.58	1.48	2.06	1.73	2.20	1.02	0.75	4.70	2.44	
2020 Q1 (est)	1.88	1.88	2.05	1.82	2.06	2.05	2.28	1.86	1.99	1.66	2.09	2.18	
2020 Q2	1.70	1.70	1.80	1.57	1.57	2.10	1.67	1.63	1.70	1.41	1.90	1.67	
2020 Q3	2.00	2.00	1.80	1.57	1.57	2.10	1.67	1.63	1.70	1.41	2.00	1.97	
2020 Q4	2.45	2.45	2.25	2.02	2.02	2.55	2.12	2.08	2.15	1.86	2.25	2.42	
2020 Full Year	2.01	2.01	1.98	1.75	1.80	2.20	1.94	1.80	1.88	1.58	2.06	2.06	
2020 Q2-Q4	2.05	2.05	1.95	1.72	1.72	2.25	1.82	1.78	1.85	1.56	2.05	2.02	
2021	2.55	2.55	2.25	2.02	2.02	2.55	2.12	2.08	2.15	1.86	2.25	2.52	
2022	2.62	2.65	2.35	2.12	2.12	2.65	2.22	2.18	2.25	1.96	2.35	2.62	
2023	2.67	2.75	2.45	2.22	2.22	2.75	2.32	2.28	2.35	2.06	2.45	2.72	
2024	2.71	2.85	2.55	2.31	2.31	2.85	2.41	2.38	2.45	2.16	2.55	2.82	
2025	2.75	2.95	2.65	2.41	2.41	2.95	2.51	2.48	2.65	2.36	2.65	2.92	
2026	2.75	3.01	2.70	2.46	2.46	3.00	2.56	2.53	2.70	2.41	2.71	2.98	
2027	2.75	3.07	2.76	2.52	2.52	3.06	2.62	2.59	2.76	2.47	2.77	3.04	
2028	2.75	3.13	2.81	2.57	2.57	3.11	2.67	2.64	2.81	2.52	2.83	3.10	
2029	2.75	3.19	2.87	2.62	2.62	3.17	2.72	2.70	2.87	2.57	2.89	3.16	
2030+	2.75	+2.0%/yr	+2.0%/yr	+2.0%/yr	+2.0%/yr	+2.0%/yr	+2.0%/yr	+2.0%/yr	+2.0%/yr	+2.0%/yr	+2.0%/yr	+2.0%/yr	

Unless otherwise stated, the gas price reference point is the receipt point on the applicable provincial gas transmission system known as the plant gate. The plant gate price represents the price before raw gathering and processing charges are deducted.

Table 3
GLJ Petroleum Consultants
International Crude Oil
Price Forecast
Effective April 1, 2020

	United States		Europe		Latin America		Mideast Gulf and Mediterranean					Africa	Asia-Pacific		Russia / C.I.S.	
	Cushing, OK	Louisiana	UK	Mexico	Colombia	Oman	OPEC	Abu Dhabi	Iran	Algeria	Iraq	Nigeria	Indonesia	Malaysia	Russia	Russia
	WTI	LLS*	Brent	Maya	Vasconia	DME	Basket	Murban	Iran Heavy	Saharan	Basrah Light	Bonny Light	Minas	Tapis	ESPO**	Urals
	39.6 API	35.6 API	38.3 API	21.8 API	24.5 API	34 API	32.7 API	40.2 API	30.2 API	45.3 API	30.5 API	33.4 API	35.3 API	45.2 API	34.8 API	31.7 API
	0.24% S	0.37% S	0.37% S	3.33% S	0.95% S	2.00% S	1.77% S	0.79% S	1.77% S	0.09% S	2.90% S	0.16% S	0.09% S	0.03% S	0.62% S	1.35% S
Year	USD/bbl	USD/bbl	USD/bbl	USD/bbl	USD/bbl	USD/bbl	USD/bbl	USD/bbl	USD/bbl	USD/bbl	USD/bbl	USD/bbl	USD/bbl	USD/bbl	USD/bbl	USD/bbl
2020 Q2-Q4	30.00	32.00	34.00	30.60	31.00	34.75	34.25	34.80	25.50	34.20	37.40	33.60	33.40	38.50	37.00	30.50
2021	41.00	45.00	45.50	40.95	41.50	45.75	45.25	46.30	37.00	45.70	48.90	45.10	42.50	50.00	48.50	42.00
2022	47.50	52.50	52.50	47.25	48.50	52.75	52.25	53.30	44.00	52.70	55.90	52.10	49.50	57.00	55.50	49.00
2023	52.50	57.50	57.50	51.75	53.50	57.75	57.25	58.30	49.00	57.70	60.90	57.10	54.50	62.00	60.50	54.00
2024	57.50	62.50	62.50	56.25	58.50	62.75	62.25	63.30	54.00	62.70	65.90	62.10	59.50	67.00	65.50	59.00
2025	58.95	63.95	62.95	56.65	58.95	63.20	62.70	63.75	54.45	63.15	66.35	62.55	59.95	67.45	65.95	59.45
2026	60.13	65.13	64.13	57.72	60.13	64.38	63.88	64.93	55.63	64.33	67.53	63.73	61.13	68.63	67.13	60.63
2027	61.33	66.33	65.33	58.80	61.33	65.58	65.08	66.13	56.83	65.53	68.73	64.93	62.33	69.83	68.33	61.83
2028	62.56	67.56	66.56	59.90	62.56	66.81	66.31	67.36	58.06	66.76	69.96	66.16	63.56	71.06	69.56	63.06
2029	63.81	68.81	67.81	61.03	63.81	68.06	67.56	68.61	59.31	68.01	71.21	67.41	64.81	72.31	70.81	64.31
2030+	+2.0%/yr	+2.0%/yr	+2.0%/yr	+2.0%/yr	+2.0%/yr	+2.0%/yr	+2.0%/yr	+2.0%/yr	+2.0%/yr	+2.0%/yr	+2.0%/yr	+2.0%/yr	+2.0%/yr	+2.0%/yr	+2.0%/yr	+2.0%/yr

* LLS - Light Louisiana Sweet

** ESPO - Eastern Siberian Pacific Ocean Blend

Historical futures contract price is an average of the daily settlement price of the near month contract over the calendar month.

Table 4
 GLJ Petroleum Consultants
International Natural Gas & LNG
Price Forecast
 Effective April 1, 2020

Year	US Natural Gas						European Natural Gas			Asia-Pacific	India
	Henry Hub Natural Gas USD/MMBtu	Midwest @ Chicago USD/MMBtu	Rockies Natural Gas USD/MMBtu	Algonquin Natural Gas USD/MMBtu	Malin Natural Gas USD/MMBtu	Permian Natural Gas USD/MMBtu	NBP Natural Gas USD/MMBtu	TTF Natural Gas USD/MMBtu	Russian Natural Gas USD/MMBtu	JKM Natural Gas USD/MMBtu	India Domestic Natural Gas USD/MMBtu
2020 Q2-Q4	2.05	1.95	1.80	2.32	1.85	1.05	3.33	3.28	3.23	3.73	2.50
2021	2.55	2.45	2.30	3.25	2.35	1.80	4.25	4.20	4.15	4.65	3.00
2022	2.65	2.55	2.40	3.15	2.45	2.15	5.00	4.95	4.90	5.40	3.50
2023	2.75	2.65	2.50	3.25	2.55	2.25	5.50	5.45	5.40	5.90	3.80
2024	2.85	2.75	2.60	3.35	2.65	2.35	6.00	5.95	5.90	6.40	4.10
2025	2.95	2.85	2.70	3.45	2.75	2.45	6.25	6.20	6.15	6.65	4.30
2026	3.01	2.91	2.76	3.51	2.81	2.51	6.50	6.45	6.40	6.90	4.45
2027	3.07	2.97	2.82	3.57	2.87	2.57	6.75	6.70	6.65	7.15	4.60
2028	3.13	3.03	2.88	3.63	2.93	2.63	7.00	6.95	6.90	7.40	4.75
2029	3.19	3.09	2.94	3.69	2.99	2.69	7.25	7.20	7.15	7.65	4.90
2030+	+2.0%/yr	+2.0%/yr	+2.0%/yr	+2.0%/yr	+2.0%/yr	+2.0%/yr	+2.0%/yr	+2.0%/yr	+2.0%/yr	+2.0%/yr	+2.0%/yr

NBP - National Balancing Point LNG

JKM - Japanese Korean Marker LNG

TTF - Title Transfer Facility LNG

Russian Gas - Average European import border price

Table 5
GLJ Petroleum Consultants
Natural Gas Liquids
Price Forecast
Effective April 1, 2020

Year	Canadian Natural Gas Liquids					US Natural Gas Liquids							Asia/Europe/Other	
	Edmonton					Conway			Mont Belvieu				Far East Index	
	Ethane CAD/bbl	Propane CAD/bbl	Butane CAD/bbl	Condensate CAD/bbl	E/P Mix* USD/bbl	Propane USD/bbl	Butane USD/bbl	Condensate USD/bbl	Ethane USD/bbl	Propane USD/bbl	Butane USD/bbl	Condensate USD/bbl	Propane USD/bbl	Butane USD/bbl
2020 Q2-Q4	5.99	9.61	21.23	37.47	4.10	10.50	15.30	27.00	6.87	12.00	16.50	27.60	18.70	22.10
2021	7.01	19.18	33.08	52.05	5.10	16.40	20.91	36.90	9.56	20.50	22.55	37.72	25.03	29.57
2022	7.36	25.41	39.52	61.56	5.30	19.00	24.23	42.75	9.94	23.75	26.13	43.70	28.88	34.13
2023	7.71	28.89	45.57	68.92	5.50	21.00	26.77	47.25	10.31	26.25	28.88	48.30	31.63	37.38
2024	8.05	32.32	50.99	75.84	5.70	23.00	29.32	51.75	10.69	28.75	31.63	52.90	34.38	40.63
2025	8.39	32.97	52.02	77.27	5.90	23.58	30.06	53.06	11.06	29.48	32.42	54.23	34.62	40.92
2026	8.57	33.68	53.14	78.84	6.02	24.05	30.67	54.12	11.29	30.07	33.07	55.32	35.27	41.68
2027	8.76	34.40	54.27	80.44	6.14	24.53	31.28	55.20	11.51	30.67	33.73	56.42	35.93	42.46
2028	8.94	35.14	55.44	82.08	6.26	25.02	31.91	56.30	11.74	31.28	34.41	57.56	36.61	43.26
2029	9.13	35.89	56.62	83.75	6.38	25.52	32.54	57.43	11.96	31.90	35.10	58.71	37.30	44.08
2030+	+2.0%/yr	+2.0%/yr	+2.0%/yr	+2.0%/yr	+2.0%/yr	+2.0%/yr	+2.0%/yr	+2.0%/yr	+2.0%/yr	+2.0%/yr	+2.0%/yr	+2.0%/yr	+2.0%/yr	+2.0%/yr

Butane prices at Conway and Mont Belvieu represent a blended price of two thirds normal butane and one third iso-butane.

*Conway E/P mix is blended at 80%-20%

Table 6
 GLJ Petroleum Consultants
International Exchange Rates
Forecast
 Effective April 1, 2020

Year	Inflation %	Canada CADUSD Exchange Rate CAD/USD	UK GBPUSD Exchange Rate GBP/USD	Euro EURUSD Exchange Rate EUR/USD	Australia AUDUSD Exchange Rate AUD/USD	China USDCNY Exchange Rate USD/CNY	Japan USDJPY Exchange Rate USD/JPY
2020 Q2-Q4	0.0	0.720	1.240	1.103	0.620	7.00	110.00
2021	0.0	0.730	1.275	1.130	0.660	7.00	110.00
2022	1.0	0.735	1.300	1.150	0.700	6.90	110.00
2023	2.0	0.740	1.300	1.150	0.730	6.90	110.00
2024	2.0	0.745	1.300	1.150	0.740	6.90	110.00
2025	2.0	0.750	1.300	1.150	0.750	6.90	110.00
2026	2.0	0.750	1.300	1.150	0.750	6.90	110.00
2027	2.0	0.750	1.300	1.150	0.750	6.90	110.00
2028	2.0	0.750	1.300	1.150	0.750	6.90	110.00
2029	2.0	0.750	1.300	1.150	0.750	6.90	110.00
2030+	2.0	0.750	1.300	1.150	0.750	6.90	110.00

GLJ Forecasts a variety of other exchange rates that can be obtained upon request.

Table 7
 GLJ Petroleum Consultants
Power and Refined Products
Forecast
 Effective April 1, 2020

Year	Electricity	Canadian Fuels			US Fuels		
	Alberta AESO CAD/MWh	Diesel ULS* CAD/Ltr	Gasoline Regular CAD/Ltr	Heating Oil CAD/Ltr	Diesel ULS* USD/Gallon	Gasoline Regular USD/Gallon	Heating Oil USD/Gallon
2020 Q2-Q4	58.50	0.66	0.65	0.60	1.25	1.20	1.26
2021	67.49	0.89	0.88	0.82	1.35	1.23	1.35
2022	70.52	1.05	1.04	0.96	1.56	1.43	1.57
2023	73.58	1.19	1.18	1.09	1.73	1.57	1.73
2024	76.55	1.34	1.32	1.22	1.89	1.73	1.90
2025	79.53	1.36	1.35	1.25	1.94	1.77	1.95
2026	81.15	1.39	1.38	1.27	1.98	1.80	1.98
2027	82.77	1.42	1.41	1.30	2.02	1.84	2.02
2028	84.38	1.45	1.44	1.33	2.06	1.88	2.06
2029	86.00	1.48	1.47	1.36	2.10	1.91	2.11
2030+	+2.0%/yr	+2.0%/yr	+2.0%/yr	+2.0%/yr	+2.0%/yr	+2.0%/yr	+2.0%/yr

Canadian fuel prices are national average prices

US fuel prices are an average of Gulf Coast and New York Harbor

* ULS - Ultra Low Sulphur